

In the Claims:

1. (currently amended) A microelectronic package comprising:
- a microelectronic component having a mounting surface;
 - a substrate having a facing surface; and
 - an attachment layer that is interposed between and bonded to said mounting surface of said microelectronic component and said facing surface of said substrate so as to attach said microelectronic component onto said substrate;
- wherein:
- said attachment layer comprises a layer of an adhesive, and plural generally ball-shaped spacer elements dispersed in said adhesive, and an anti-static agent applied to said spacer elements or mixed in said adhesive;
 - said spacer elements respectively have a nominal diameter that corresponds to a stand-off distance between said mounting surface of said microelectronic component and said facing surface of said substrate; and
 - said spacer elements comprise a plastic material that is at least slightly elastically flexible and resilient.
2. (original) The microelectronic package according to claim 1, wherein said adhesive has a first coefficient of thermal expansion, and said plastic material of said spacer elements has a second coefficient of thermal expansion that at least approximately corresponds to said first coefficient of thermal expansion of said adhesive.

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1 3. (original) The microelectronic package according to
2 claim 1, wherein said adhesive has a first coefficient of
3 thermal expansion, and said plastic material of said spacer
4 elements has a second coefficient of thermal expansion that
5 is not less than one tenth of said first coefficient of
6 thermal expansion of said adhesive.

1 4. (original) The microelectronic package according to
2 claim 1, wherein said spacer elements consist essentially
3 of said plastic material, and said plastic material has a
4 coefficient of thermal expansion on the order of 10^{-4} K^{-1} or
5 10^{-5} K^{-1} .

1 5. (original) The microelectronic package according to
2 claim 4, wherein said coefficient of thermal expansion is
3 in a range from $4 \times 10^{-5} \text{ K}^{-1}$ to $6 \times 10^{-5} \text{ K}^{-1}$.

1 6. (original) The microelectronic package according to
2 claim 5, wherein said plastic material is a mixture or
3 copolymer of at least two different polymers.

1 7. (original) The microelectronic package according to
2 claim 1, wherein said plastic material is elastically
3 flexible and resilient to such an extent so that said
4 spacer elements exhibit an elastic flexible deformability
5 of at least 1% of said nominal diameter in said attachment
6 layer in said microelectronic package.

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1 8. (original) The microelectronic package according to
2 claim 1, wherein said generally ball-shaped spacer elements
3 respectively have a spherical or spheroidal shape.

1 9. (original) The microelectronic package according to
2 claim 1, wherein said nominal diameter is in a range from
3 150 μ m to 200 μ m.

1 10. (original) The microelectronic package according to
2 claim 1, wherein said spacer elements consist essentially
3 of said plastic material, which consists essentially of a
4 single polymer.

1 11. (original) The microelectronic package according to
2 claim 1, wherein said spacer elements consist essentially
3 of said plastic material, which consists essentially of a
4 mixture or copolymer of at least two different polymers.

1 12. (original) The microelectronic package according to
2 claim 1, wherein said spacer elements do not contain any
3 silica glass, do not contain any alumina, and do not
4 contain any metal.

Claim 13 (canceled).

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1 14. (original) The microelectronic package according to
2 claim 1, wherein said microelectronic component comprises
3 a sensor.

1 15. (original) The microelectronic package according to
2 claim 1, wherein said adhesive is a silicone adhesive.

1 16. (original) The microelectronic package according to
2 claim 1, wherein said attachment layer is formed from a
3 single drop of said adhesive with said spacer elements
4 dispersed therein, which drop has been applied on said
5 facing surface of said substrate at a location centered
6 relative to said mounting surface of said microelectronic
7 component, and which drop then has been pressed between
8 said facing surface and said mounting surface and
9 thereafter cured to form said attachment layer.

1 17. (withdrawn - currently amended) A method of manufacturing
2 the microelectronic package according to claim 1,
3 comprising the following steps:

4 applying onto said facing surface of said substrate a
5 single drop of said adhesive with said spacer elements
6 dispersed therein ~~onto said facing surface of said~~
7 ~~substrate,~~ and with said anti-static agent applied to said
8 spacer elements or mixed in said adhesive;

9 placing said microelectronic component onto said drop
10 with said mounting surface centered on said drop;

11 pressing together said microelectronic component and
12 said substrate with said drop therebetween, so as to
13 flatten said drop into a layer until said spacer elements
14 contact said mounting surface and said facing surface; and
15 then
16 curing said adhesive.

- 1 18. (currently amended) A microelectronic package comprising:
2 a microelectronic component having a mounting surface;
3 a substrate having a facing surface; and
4 an attachment layer that is interposed between and
5 bonded to said mounting surface of said microelectronic
6 component and said facing surface of said substrate so as
7 to attach said microelectronic component onto said
8 substrate;
9 wherein:
10 said attachment layer comprises a layer of an
11 adhesive, ~~and~~ plural generally ball-shaped spacer elements
12 dispersed in said adhesive, and an anti-static agent
13 applied to said spacer elements or mixed in said adhesive;
14 said spacer elements respectively have a nominal
15 diameter that corresponds to a stand-off distance between
16 said mounting surface of said microelectronic component and
17 said facing surface of said substrate;
18 said spacer elements comprise a plastic material that
19 is at least slightly elastically flexible and resilient;
20 and

21 said adhesive has a first coefficient of thermal
22 expansion, and said plastic material of said spacer
23 elements has a second coefficient of thermal expansion that
24 at least approximately corresponds to said first
25 coefficient of thermal expansion of said adhesive.

1 19. (currently amended) A microelectronic package comprising:
2 a microelectronic component having a mounting surface;
3 a substrate having a facing surface; and
4 an attachment layer that is interposed between and
5 bonded to said mounting surface of said microelectronic
6 component and said facing surface of said substrate so as
7 to attach said microelectronic component onto said
8 substrate;

9 wherein:

10 said attachment layer comprises a layer of an
11 adhesive, and plural generally ball-shaped spacer elements
12 dispersed in said adhesive, and an anti-static agent
13 applied to said spacer elements or mixed in said adhesive;

14 said spacer elements respectively have a nominal
15 diameter that corresponds to a stand-off distance between
16 said mounting surface of said microelectronic component and
17 said facing surface of said substrate;

18 said spacer elements comprise a material that is at
19 least slightly elastically flexible and resilient; and

20 said adhesive has a first coefficient of thermal
21 expansion, and said material of said spacer elements has a
22 second coefficient of thermal expansion that is not less

23 than one tenth of said first coefficient of thermal
24 expansion of said adhesive.

1 20. (new) The microelectronic package according to claim 1,
2 wherein said anti-static agent is applied to said spacer
3 elements.

1 21. (new) The microelectronic package according to claim 1,
2 wherein said anti-static agent is mixed in said adhesive.

[RESPONSE CONTINUES ON NEXT PAGE]

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